

### Abstract of the Disclosure

Newly identified mammalian taste-cell-specific G Protein-Coupled Receptors and the genes encoding said receptors are described. Specifically, T2R taste G  
5 Protein-Coupled Receptors that are believed to be involved in bitter taste sensation, and the genes encoding the same, are described, along with methods for isolating such genes and for isolating and expressing such receptors. Methods for representing taste perception of a particular tastant in a mammal are also described, as are methods for generating a novel molecules or combinations of molecules that elicit a predetermined  
10 taste perception in a mammal, and methods for simulating one or more tastes.